

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.
(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name S. S. DUNDEE.	Official Number 144713.	Nationality and Port of Registry BRITISH DUNDEE.	Gross Tonnage	Date of Build 1934 2.Ms.	Port of Survey.....
Moulded Dimensions: Length 281.00' Breadth 42.00' Depth 25.50'					Date of Survey 10.9.47.
Moulded displacement at moulded draught = 85 per cent. of moulded depth.....tons					Surveyor's Signature.....
Coefficient of fineness for use with Tables .68 ESTIMATED.					Particulars of Classification * 100 A1 with freeboard.

DEPTH FOR FREEBOARD (D). Moulded depth 25.50 Stringer plate03 Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ Depth for Freeboard (D) = 25.53.	DEPTH CORRECTION. (a) Where D is greater than Table depth (D-Table depth) R = (25.53-18.73) 2.162 = +14.70" 6.80 (b) Where D is less than Table depth (if allowed) (Table depth-D) R = ✓ If restricted by superstructures ✓	ROUND OF BEAM CORRECTION. Moulded Breadth (B) 42.00' Standard Round of Beam = $\frac{B \times 12}{50} =$ 10.08 Ship's Round of Beam = 6.00 Difference Deficient 4.08 Restricted to Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{4.08}{4} \times \frac{8302}{562} = +85"$
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DEDUCTION FOR SUPERSTRUCTURES.					Standard Height of Superstructure 6.31	
	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	" " R.Q.D. ✓
Poop enclosed						Deduction for complete superstructure 34.07
" overhang						Percentage covered $\frac{S}{L} =$
R.Q.D. enclosed						" " $\frac{S_1}{L} =$ 16.98
" overhang						" " $\frac{E}{L} =$
Bridge enclosed	25.00	25.00	7.5	✓	25.00	Percentage from Table, Line A. 8.49
" overhang aft						(corrected for absence of forecastle (if required))
" overhang forward						Percentage from Table, Line B. 10.77
F'cle enclosed	22.71	22.71	7.5	✓	22.71	(corrected for absence of forecastle (if required))
" overhang						Interpolation for bridge less than .2L (if required) 8.49 + (2.28 x $\frac{25}{562}$) = 9.50
Trunk aft						Deduction = 34.07 x .095 = 3.24.
" forward						
Tonnage opening aft						
" " forward						
Total	47.71	47.71			47.71	

SHEER CORRECTION.							
Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P.	38.10	1	38.10	30.00	30.00	1	30.00
$\frac{1}{2}$ L from A.P.	16.95	4	67.80	13.35	13.35	4	53.40
$\frac{3}{8}$ L "	4.20	2	8.40	3.30	3.30	2	6.60
Amidships	-	4	-	-	-	4	-
$\frac{3}{8}$ L from F.P.	8.40	2	16.80	7.92	7.92	2	15.84
$\frac{1}{2}$ L "	33.90	4	135.60	32.04	32.04	4	128.16
F.P.	76.20	1	76.20	72.00	72.00	1	72.00
Total			342.90				306.00
Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{36.90}{18} (.75 - .0849) = +1.36.$ If limited on account of midship superstructure. .6651 If limited to maximum allowance of 1½ ins. per 100 ft. ✓							

Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard. Depth to Freeboard Deck = 25.53. Summer freeboard = Moulded draught (d) = Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = Addition for Winter North Atlantic Freeboard (if required) =	Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta =$ Tons per inch immersion at summer load water line T = Deduction = $\frac{\Delta}{40 T}$ inches =	TABULAR FREEBOARD corrected for Flush Deck (if required) 38.93 Correction for coefficient N/L. Depth Correction 14.70 Deduction for superstructures 3.24 Sheer correction 1.36 Round of Beam correction85 Correction for Thickness of Deck amidships ... Other corrections, scantlings, etc. Summer Freeboard =
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SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck :-

Tropical Fresh Water Line above Centre of Disc	Tropical Fresh Water Freeboard
Fresh Water Line	"	"	Fresh Water	"	"
Tropical Line	"	"	Tropical	"	"
Winter Line	below	"	Winter	"	"
Winter North Atlantic Line	"	"	Winter North Atlantic	"	"